

Proposed Project

Upper Little Patuxent Watershed

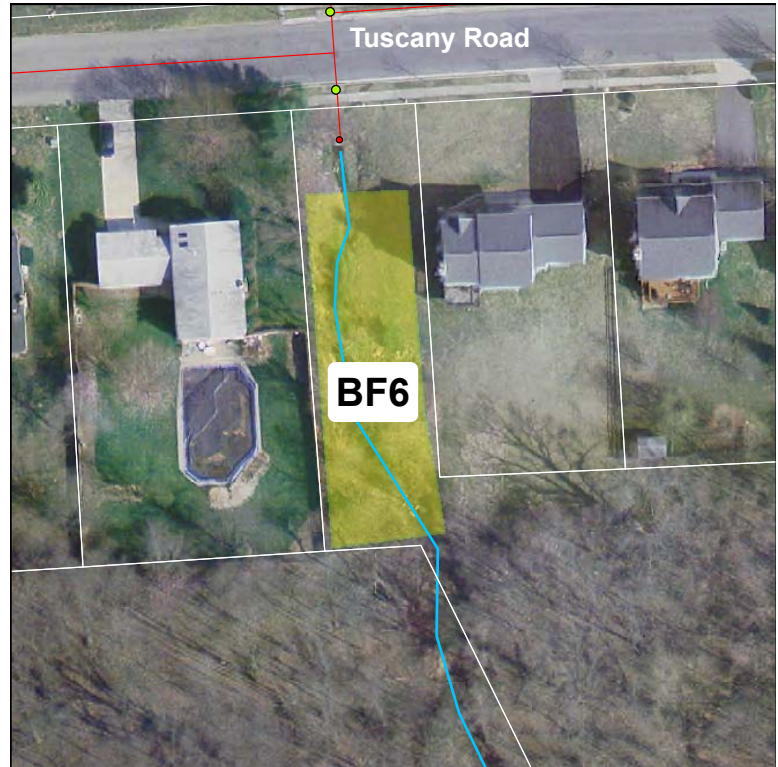
Project Number: BF6
Subwatershed: Font Hill 1

Project Type: Riparian Buffer Replacement
Project Size: Approx. 170 feet in length / 0.17 acres

Project Location: Adjacent to Tuscany Road.

Project Description: The buffer along both sides of the stream in this area has been greatly reduced or is absent. The project would entail planting of native trees and shrubs to widen the existing buffer. For maximum benefit, this project should be combined with project 1629_1630, a stream restoration in the same area.

Use of volunteer assistance for site preparation, planting and necessary maintenance and monitoring of the site could help reduce overall project cost.



Project Benefits:

Stabilization	Additional trees and shrubs will help stabilize the stream bank.
Habitat	Planting here will provide some habitat improvement but is limited by the proximity of the houses and roadway.
Water Quality	A more established buffer will provide shading effects to reduce water temperature and will trap runoff and pollutants such as fertilizers from the adjacent properties.

Project Constraints:

Environmental	No environmental/permitting constraints are present, unless combined with stream restoration project 1629_1630.
Property Ownership	This project is on County owned open space property (the Fairways natural resources open space). The proximity of houses, especially to the east, may be a constraint.
Facility Access	Excellent access to this site is obtained from Tuscany Road.
Design / Construction	No major design or construction constraints are present. The design should incorporate native vegetation and a marked no-mow zone for understory development. Homeowner cooperation along the eastern boundary would be very important.

Proposed Project

Upper Little Patuxent Watershed

Project Number: BF6

Subwatershed: Font Hill 1

Project Type: Riparian Buffer Replacement

Project Size: Approx. 170 feet in length / 0.17 acres

Cost Detail:

ITEM	QTY	UNITS	UNIT COST	TOTAL (Volunteer Labor)	TOTAL (Without Volunteer Labor)
Riparian Buffer Replacement					
Plant Material (trees)	0.17	AC	\$3,750.00	\$638	\$638
Plant Material (shrubs)	0.17	AC	\$2,725.00	\$463	\$463
Mulch, Tree Shelter	116	PLANTS	\$6.00	\$694	\$694
Cost to Plant	116	PLANTS	\$6.00	\$0	\$694
Site Preparation (volunteer)		AC	\$0.00	\$0	\$0
Basic Site Maintenance and Monitoring (volunteer)		AC	\$0.00	\$0	\$0
Direct Construction Subtotal				\$1,795	\$2,489
Base Construction Cost				\$1,795	\$2,489
Mobilization (10% of Directs or \$1,000)				\$0	\$0
Subtotal				\$1,795	\$2,489
Contingency (30%)				\$538	\$747
Construction Subtotal				\$2,333	\$3,236
Env't'l Studies / Permitting (5% of Construction or \$1,000)				\$0	\$0
Landscape Design and Surveys (25% of Construction or \$5,000)				\$0	\$0
Total Capital Cost				\$2,333	\$3,236
Operations and Maintenance Costs					
Annual Maintenance	5	Percent		\$90	\$124
Discount Rate	5	Percent			
Expected Life	5	Years			
Net Present Value of Annual Costs				\$389	\$539
Life Cycle Cost				\$2,800	\$3,800

Cost Notes and Assumptions:

Project costs were derived for both volunteer and paid labor. In calculating costs for volunteer labor it is assumed that local volunteer organizations could accomplish the project with County assistance and oversight. Site preparation, planting and any necessary maintenance and monitoring would be conducted by volunteers.

Planting density is planned at 1 tree or shrub planted at 8 foot intervals for a total of 681 plants per acre.

Size and species of trees and shrub plant material is based on approved Howard County Recreation and Parks information and is typically a 3-4 foot plant. Use of more mature or more immature plant material would affect the planting density and cost per plant.

Cost of plant material is based on 2009 survey of local and regional wholesale native plant nurseries. Plant material (seedlings) may also be obtained from the Maryland Department of Natural Resources, State Forest Tree Nursery at a much reduced cost or through Howard County's Stream ReLeaf program at no cost.